BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP

3037406962

TELEPHONE: (303) 740-1980

INTELLECTUAL PROPERTY LAW 1279 OAKMEAD PARKWAY SUNNYVALE, CA. 94085-4040

FACSIMILE: (303) 740-6962

RECEIVED CENTRAL PAX CENTER

DEC 1 7 2007

FACSIMILE COVER SHEET

E	Deliver to:	Mai, Tan V., USPTO		Art Group:2193						
Facsi	mile No.:	(571) 273-8300		Date: <u>December 17, 2007</u>						
	From:	Brent E. Vecchia, Reg. No. 48,01	1_							
Our Do	ocket No.:	42P14609	N	Number of pages _13_including this sheet.						
Applica	ation No.:	10/658,612		Filing Date: 9/8/2003						
Docket Due Date(s): 12/17/2007 Enclosed are the following documents:										
		(pgs)		I Issue Fee Transmittal						
	Appeal Brief	(pgs)		Notice of Appeal (in duplicate)						
	opplication: _			Petition for:						
		pgs) w/cover & abstract)		Request for Continued Examination (RCE)						
	•	& Cover Sheet (pgs)	<u> </u>							
3 3 0	Certificate of	Eacsimile		Request & Certification Under 35 USC 122(b)(2)(B)(i)						
	Continued Pr	osecution Application (CPA)		Request to Rescind Previous Nonpublication Request						
	Declaration &	POA (pgs)		Response to Notice of Missing Parts & Formalities Letter						
	Orawings: _	sheets figures		Response to Written Opinion (pgs)						
	Extension of	Time:		Terminal Disclaimer						
3 53 F	ee Transmit	tal (in duplicate)		Transmittal of Publication Fee Due						
	DS & PTO/S	B/08 (pgs)	X	Transmittal Letter						
	Other:									
CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8A)										
		this correspondence is being transmitted		y facsimile on the date shown below to the United States						
Patent and Trademark Office.										

Confidentiality Note: The documents accompanying this facsimile transmission contain information from the law firm of Blakely, Sokoloff, Taylor & Zafman which is confidential or privileged. The information is intended to be for the use of the individual or entity named on this transmission sheet. If you are not the intended recipient, be aware that any disclosure, copyling, distribution or use of the contents of this faxed Information is prohibited. If you have received this facsimile in error, please notify us by telephone immediately so that we can arrange for the retrieval of the original documents at no cost to you.

12/17/2007 Date

If you do not receive all the pages, or if there is any difficulty in receiving, please call: (303) 740-1980 and ask for Shannon Serrano.

DEC-17-2007 16:59 From:BSTZ

TRANSMITTAL FORM			Application No.	10/658,612				
			Filing Date	September 8, 2003				
(to be used for all	correspondence afte	r initial filing)	First Named Inventor	Gopalan Ramanujam				
			Art Unit	2193				
			Examiner Name	Mai, Tan V.				
Total Number of Pa	ages in This Submission	13	Attorney Docket Number	42P14609				
ENCLOSURES (check all that apply)								
Fee Transmittal	Form	Drawing(s)		After Allowance Communication to TC				
Fee Attac	hed	Licensing-related Papers		Appeal Communication to Board of Appeals and Interferences				
Amendment / Re	e ply	Petition		Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) Proprietary Information Status Letter Other Enclosure(s) (please identify below): Facsimile Coversheet				
After Fina	al /dedaration(s)		Convert a Application					
Extension of Tin	ne Request	Power of A Change of	ttorney, Revocation Correspondence Address					
Express Abando	onment Request	Terminal D	isclaimer					
	dosure Statement	Request for	r Refund					
PTO/SB/		CD, Number of CD(s)						
Certified Copy of Document(s)		Landscape Table on CD						
Response to Mi	ssing Parts/ lication	Remarks						
1 =	: Filing Fee		<u></u>					
	aration/POA							
Parts und 1.52 or 1.	e to Missing ler 37 CFR 53							
	SIGNATURI	E OF APPLICAN	IT, ATTORNEY, OR AG	SENT				
Firm	Brent E. Vecchi	a, Reg. No. 48	3,011					
or Individual name	BLAKELY, S	OKOLOFF, T	TAYLOR & ZAFM	AN LLP				
Signature								
Date								
CERTIFICATE OF MAILING/TRANSMISSION								
I hereby certify that this correspondence is being transmitted via facsimile on the date shown below to the United States Patent and Trademark Office.								
Typed or printed na	me Shannon Ser	Tano /						
Signature	Manns	n Sena	m. C	Date December 17, 2007				
Based on PTO/SB/21 (10-07) a SEND TO: Commissioner for F	Based on PTO/SB/21 (10-07) as modified by Blakely, Solokoff, Taylor & Zafman (wtr) 10/05/2007. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22312-1450							

12/17/07

Date

FEE TRANSMITTAL					Complete if Known					
F	5 5 ,10)	, I AL	Application Number 10/658,612					
		r FY 2			Filing Date		ember 8, 20			
		ere subject to			First Named Inven		alan Ramanujam			
Applicar	ıt claims sm	nall entity st	atus. Se	e 37 CFR 1.27.	Examiner Name		Tan V.			
TOTAL A	MOUNT OF	F PAYMEN	т	(\$)	Art Unit Attorney Docket N		3 2609			
	Ambility Duckering. TAT 14007									
METHOD OF PAYMENT (check all that apply)										
□Check □Credit card □ Money Order ☑None □Other (please identify):										
Deposit A	Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP									
For the a	above-ider	ntified der	osit acc	ount, the Director is h	nereby authorized	to: (check all that	apply)			
☐ Cha	arge fee(s)) indicated	i below		Charge f	fee(s) indicated be	low, except	for the filing fee		
⊠ Cha	arge any a	dditional i	fee(s) or	underpayment of fee	(s) 🛛 Credit a	ny overpayments				
und	ler 37 CFF	₹ §§ 1.16,	1.17, 1.	.18 and 1.20.						
FEE CALCU	LATION									
Large Er		Small	<u>-</u>	,				1		
Fee	Fee	Fee		Fee Descripti	ion			Fee Paid		
Code	(\$)	Code	(\$)	•						
1051	130	2051		Surcharge - late	-					
1052	50	2052	25	Surcharge - late	e provisional f	iling fee or co	ver sheet			
2053	130	2053	130	Non-English sp	ecification					
1251	120	2251	60	Extension for re	Extension for reply within first month					
1252	460	2252	230	Extension for reply within second month						
1253	1,050	2253	525	Extension for reply within third month						
1254	1,640	2254	820	Extension for reply within fourth month						
1255	2,230	2255	1,115	Extension for reply within fifth month						
1401	510	2401	255	Notice of Appeal						
1402	510	2402	255	Filing a brief in support of an appeal						
1403	1,030	2403	515	Request for oral hearing						
1451	1,510	2451	1,510	Petition to institute a public use proceeding						
1460	130	2460	130	Petitions to the Commissioner						
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)						
1806	180	1806		Submission of Information Disclosure Stmt						
1809	810	1809	405	Filing a submission after final rejection (37 CFR § 1.129(a))						
1810	810	2810	405	For each addition	nal invention to	be examined ((37 CFR § 1.	.129(b))		
Other fee (specify)										
						SUBT	OTAL (2)) (\$)		
	<u></u>							<u> </u>		
SUBMITTE	DBY				Registration No.		1	olete (if applicable)		
Name (Print/Ty	🕬 Brei	nt E. Vecc	chia		(Altomey/Agent)	48,011	Telephone	(303) 740-1980		

Based on PTO/38/17 (12-04)88 medified by Blakely, Solokoff, Taylor & Zefman (wh) 12/15/2004. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature

12/17/07

Date

FEE TRANSMITTAL				Camplete if Known					
for FY 2007					Application Number 10/658,612				
					Filing Date		tember 8, 20		
		ere subject to			First Named Inven	Mor Gor	alan Ramar	nujam	
Applicar	nt claims sm	all entity st	tatus. Se	e 37 CFR 1.27.	Art Unit	219	, Tan V.		
TOTAL AMOUNT OF PAYMENT (\$)					Attorney Docket N	o. 42P	4609		
METHOD OF PAYMENT (check all that apply)									
□Check □Credit card □ Money Order ☑None □Other (please identify):									
Deposit A	Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP								
For the a	bove-ider	ntified der	nosit acc	ount, the Director is b	ereby authorized	to: (check all that	t apply)		
	arge fee(s)				☐ Charge t	(ee(s) indicated b	elow, except	for the filing fee	
⊠ Ch:	arge any a	dditional	fee(s) or	underpayment of fee((s) 🛛 Credit a	ny overpayments			
und	ler 37 CFI	R §§ 1.16,	, 1 .17, 1.	.18 and 1.20.		• •			
FEE CALCU	LATION								
Large Er		Small	Entity						
Fee	Fee	Fee		Fee Description	าท			Fee Paid	
Code	(\$)	Code	(\$)	, ce becompa	J11			reeralu	
1051	130	2051	65	Surcharge - late	filing fee or	oath	•		
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.					
2053	130	2053	130	Non-English specification					
1251	120	2251	60	Extension for reply within first month					
1252	460	2252	230	Extension for reply within second month					
1253	1,050	2253	525	Extension for reply within third month					
1254	1,640	2254	820	Extension for reply within fourth month					
1255	2,230	2255	1,115	Extension for reply within fifth month					
1401	510	2401	255	Notice of Appeal					
1402	510	2402	255	Filing a brief in support of an appeal					
1403	1,030	2403	515	Request for oral hearing					
1451	1,510	2451	1,510	Petition to institute a public use proceeding					
1460	130	2460	130	Petitions to the Commissioner					
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)					
1806	180	1806	180	Submission of Information Disclosure Stmt					
1809	810	1809	405	Filing a submission after final rejection (37 CFR § 1.129(a))					
1810 810 2810 405 For each additional invention to be examined (37 CFR § 1.129(b))									
Other fee (specify)									
	SUBTOTAL (2) (\$)) (\$)	
									
SUBMITTE					Registration No.	40.000	T -	plete (If applicable)	
Name (Print/Ty	рө) Brei	nt E. Vec	chia	_	(Attorney/Agent)	48,011	Telephone	(303) 740-1980	

Based on PTO/SB/17 (12-04 as modified by Blakely, Scickoff, Taylor & Zafman (wkr.) 12/15/2004. SEND TO: Commissioner for Patents. P.O. Box 1450, Alexandrie, VA 22312-1450

Signature

REGEIVED CENTRAL FAX CENTER

DEC 1 7 2007

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application. No.

: 10/658,612

Confirmation No. : 2531

1st Named Inventor: Gopalan Ramanujam

Art Unit

: 2193

Filed

: 09/08/2003

Examiner

: Tan V. Mai

Docket No.

: 42P14609

Customer No.

: 7590

Mail Stop Appeal Brief-Patents Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

REPLY BRIEF IN SUPPORT OF APPELLANT'S APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Sir:

Applicants (hereafter "Appellants") hereby submit this Reply Brief in response to the Examiner's Answer mailed in the above-identified case on 10/17/2007. The fees required under §41.20 for filing this Reply Brief are dealt with in the accompanying Transmittal of Appeal Brief. Appellants respectfully request consideration of this Reply Brief by the Board of Patent Appeals and Interferences for allowance of the above-captioned patent application.

An oral hearing is not desired.

REMARKS

GROUP I: CLAIMS 1-19

Claim 1 pertains to an apparatus comprising:

"a destination storage location corresponding to a first architectural register;

a functional unit to process a packed format values by converting, responsive to a control signal, a first packed first format value in a first format selected from a first plurality of packed first format values in the first format to a first plurality of second format values, said first packed first format value having a plurality of sub elements each having a first number of bits, each of the first plurality of second format values being a number represented in a second format and having a second number of bits which is greater than the first number of bits, said functional unit to store all of said first plurality of second format values into said first architectural register."

(a) Firstly, Appellants respectfully submit that claim 1 produces a useful, concrete, and tangible result, and is therefore statutory. On page 3 of the Office Action mailed 4/12/2007, the Examiner has admitted that the result "would appear to be concrete and tangible in the context of the claim". Appellants respectfully agree. However, the Examiner has asserted that "the useful result appears lacking". See e.g., page 3 of the Office Action mailed 4/12/2007. Appellants respectfully disagree. Claim 1 does produce a useful result. As one example, the result produced by claim 1 is useful for pixel processing. As another example, the result produced by claim 1 is also useful to provide shorter and in some case more rapidly executed code for some sequences. As a still further example, the result produced by claim 1 is also useful for signal processing scenarios. These examples are explained in more detail in the Appeal Brief with specific reference to the specification. Furthermore, the result produced by claim 1 may serve as an operand to a subsequent instruction, which is yet another use of the result. Accordingly, for at least one or more of these reasons, Appellants respectfully submit that claim 1 produces a useful, concrete, and tangible result, and is therefore statutory.

42P14609 -2- 10/658,612

P.7/13

In the Response to Argument section of the Examiner's Answer, the Examiner has asserted that "the result is merely numbers" and that because the result is merely a number it "does not have a real world value". Appellants respectfully disagree. Claim 1 recites "a first plurality of second format values". The first plurality of second format values are obtained through conversion of a value in a functional unit responsive to a control signal. Accordingly, a specific functional unit is used to obtain the first plurality of second format values. Furthermore, claim 1 recites that the first plurality of second format values are stored into the first architectural register. Accordingly, the result is not merely a number but rather a first plurality of second format values obtained through conversion with a specific functional unit and stored in the first architectural register. Appellants respectfully submit that values obtained through a specific functional unit and stored in an architectural register are real world values. Furthermore, as explained above, such real world values may be used for pixel processing, shorter and/or more rapidly executed code, signal processing, and may be used as an operand to a subsequent instruction.

Secondly, Appellants respectfully submit that claim 1 pertains to an apparatus having **(b)** "specific structural limitations", and specific interactions between the structural elements, and is therefore statutory. For example, claim 1 recites an apparatus comprising "a destination storage location corresponding to a first architectural register" and a specific "functional unit". The specific functional unit is "to process a packed format values by converting, responsive to a control signal," and "to store all of said first plurality of second format values into said first architectural register". As understood by Appellants, a claimed invention including "specific structural limitations" or a specific apparatus is statutory (emphasis added). See e.g., In re Iwahashi, 888 F.2d 1370, 12 USPQ 2d 1908 (Fed. Cir. 1989). Furthermore, as stated in MPEP 2106.IV.B.2, "If a claim defines a useful machine or manufacture by identifying the physical structure of the machine or manufacture in terms of its hardware or hardware and software combination, it defines a statutory product (emphasis added)". See e.g., Lowry, 32 F.3d at 1583,

-3-42P14609 10/658,612 32 USPQ2d at 1034-35; Warmerdam, 33 F.3d at 1361-62, 31 USPQ2d at 1760. Still further, as stated in MPEP 2106.IV.B.2, "A claim limited to a machine or manufacture, which has a practical application in the technological arts, is statutory (emphasis added). In most cases, a claim to a specific machine or manufacture will have (emphasis added) a practical application in the technological arts". See Alappat, 33, F.3d at 1544, 31 USPQ2d at 1557. Accordingly, Appellants respectfully submit that claim 1 pertains to an apparatus having "specific structural limitations", and is therefore statutory.

(c) Thirdly, Appellants respectfully submit that claim 1 is limited to a practical application, and is therefore statutory. Claim 1 is limited to the practical application of a function unit of the claimed apparatus to perform the claimed conversion, "responsive to a control signal" (e.g., an instruction). Accordingly, claim 1 does not attempt to protect or preempt all possible uses the claimed conversion. Rather, claim 1 makes it clear that the claimed conversion is performed responsive to the control signal. Accordingly, claim 1 certainly does not pertain to an invention that merely manipulates an abstract idea or solves a purely mathematical problem without any limitation to a practical application. Instead, claim 1 is clearly limited to the practical application of performing the claimed conversion "responsive to a control signal" (e.g., an instruction). This is useful for a microprocessor implementation. However, there are other ways of performing the conversion besides "responsive to a control signal" (e.g., an instruction). An invention that does not attempt to protect all uses of an algorithm is eligible for patent See e.g., In re Deutsch, 553 F.2d 689, 193 USPQ 645 (C.C.P.A.) 1977). protection. Accordingly, Appellants respectfully submit that claim 1 is limited to a practical application, and is therefore statutory.

For at least one or more of these reasons, Appellants respectfully submit that claim 1 is statutory.

Appellants respectfully submit that claim 15 is statutory for one or more similar reasons.

42P14609 -4- 10/658,612

GROUP II: CLAIMS 20-25

Claim 20 pertains to a method comprising:

"a module fetching a first instruction that specifies a location of a first format value in a first format among a plurality of first format values of a packed data, the first format value having a plurality of sub elements each sub element having a first number of bits;

a functional unit processing the first format value by converting the first format value to a first plurality of second format values in a second format, each of the first plurality of second format values having second format and corresponding to one of the plurality of sub elements, the second format having a multiple of the first number of bits;

storing the first plurality of second format values into a first register."

(a) Firstly, Appellants respectfully submit that claim 20 produces a useful, concrete, and tangible result, and is therefore statutory. The Examiner has admitted that the result "would appear to be concrete and tangible in the context of the claim". Appellants respectfully agree, and submit that the result is also useful. Examples of uses of the result produced by claim 20 include, but are not limited to, pixel processing, providing shorter and in some case more rapidly executed code for some sequences, and signal processing scenarios. Additionally, the result may be used as an operand to a subsequent instruction. The discussion above is pertinent to this point. Accordingly, Appellants respectfully submit that claim 20 produces a useful, concrete, and tangible result, and is therefore statutory.

In the Response to Argument section of the Examiner's Answer, the Examiner has asserted that "the result is merely numbers" and that because the result is merely a number it "does not have a real world value". Appellants respectfully disagree. Claim 20 recites "a first plurality of second format values in a second format". The first plurality of second format values in a second format conversion of a value in a functional unit responsive to a control signal. Accordingly, a specific functional unit is used to obtain the first plurality of second format values in the second format. Furthermore, claim 20 recites that the the first plurality of second format values are stored into the first register. Accordingly, the result

42P14609 -5- 10/658,612

P.10/13

is not merely a number but rather a first plurality of second format values obtained through conversion with a specific functional unit and stored into the first register. Appellants respectfully submit that such values obtained through a specific functional unit and stored in a register are real world values. Furthermore, as explained above, such real world values may be used for pixel processing, shorter and/or more rapidly executed code, signal processing, and may be used as an operand to a subsequent instruction.

(b) Secondly, Appellants respectfully submit that claim 20 is limited to a practical application, and is therefore statutory. Claim 20 is limited to the practical application of implementing the method using "a first instruction that specifies a location of a first format value in a first format among a plurality of first format values of a packed data". Accordingly, claim 20 does not attempt to protect or preempt all possible uses the claimed conversion. Rather, claim 20 makes it clear that the method includes fetching the specific first instruction. However, there are other ways of performing the conversion. An invention that does not attempt to protect all uses of an algorithm is eligible for patent protection. See e.g., In re Deutsch, 553 F.2d 689, 193 USPQ 645 (C.C.P.A.) 1977). Accordingly, Appellants respectfully submit that claim 20 is limited to a practical application, and is therefore statutory.

For at least one or more of these reasons, Appellants respectfully submit that claim 20 is statutory.

GROUP III: CLAIMS 32-33

Claim 32 pertains to:

"A tangible machine readable medium carrying an instruction, which if executed by a machine, causes the machine to perform the operations of:

converting an integer value, the integer value being among a plurality of integer values of a packed data and having a first integer format having a plurality of sub elements each having a first number of bits, to a plurality of floating point values, each of the plurality of floating point

-6-10/658,612 42P14609

values having a first floating point format, the first floating point format having a multiple of the first number of bits;

storing the plurality of floating point values into a first register."

(a) Firstly, Appellants respectfully submit that claim 32 produces a useful, concrete, and tangible result, and is therefore statutory. The Examiner has admitted that the result "would appear to be concrete and tangible in the context of the claim". Appellants respectfully agree, and submit that the result is also useful. Examples of uses of the result produced by claim 20 include, but are not limited to, pixel processing, providing shorter and in some case more rapidly executed code for some sequences, and signal processing scenarios. Additionally, the result may be used as an operand to a subsequent instruction. The discussion above is pertinent to this point. Accordingly, Appellants respectfully submit that claim 32 produces a useful, concrete, and tangible result, and is therefore statutory.

In the Response to Argument section of the Examiner's Answer, the Examiner has asserted that "the result is merely numbers" and that because the result is merely a number it "does not have a real world value". Appellants respectfully disagree. Claim 32 recites "a plurality of floating point values, each of the plurality of floating point values having a first floating point format". The plurality of floating point values are obtained through conversion of an integer value by the machine executing the instruction. Furthermore, claim 32 recites that the plurality of floating point values are stored into the first register. Accordingly, the result is not merely a number but rather the plurality of floating point values obtained through conversion performed by the machine executing the instruction and stored into the first register. Appellants respectfully submit that such values in the first register are real world values. Furthermore, as explained above, such real world values may be used for pixel processing, shorter and/or more rapidly executed code, signal processing, and may be used as an operand to a subsequent instruction.

42P14609 -7- 10/658,612

- (b) Secondly, Appellants respectfully submit that claim 32 pertains to a "tangible machine-readable medium carrying an instruction", and is therefore statutory. As understood by Appellants, computer programs embodied in a tangible medium are patentable subject matter under 35 U.S.C. Section 101. As discussed in MPEP 2106.01, "When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases (emphasis added) since use of technology permits the function of the descriptive material to be realized". As discussed in MPEP 2106.01 I., "a claimed computer-readible medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory" (emphasis added). See e.g., Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. See also e.g., In re Beauregard, 35 USPQ 2d 1383, 1384 (Fed. Cir. 1995).
- (c) Thirdly, Appellants respectfully submit that claim 32 is limited to a practical application, and is therefore statutory. Claim 32 is limited to the practical application of performing the claimed operations as a result of the machine executing the instruction. Accordingly, claim 32 does not attempt to protect or preempt all possible uses of the claimed operations. Rather, claim 32 makes it clear that the claimed operations are performed as a result of the machine executing the instruction. An invention that does not attempt to protect all uses of an algorithm is eligible for patent protection. See e.g., In re Deutsch, 553 F.2d 689, 193 USPQ 645 (C.C.P.A.) 1977). Accordingly, Appellants respectfully submit that claim 32 is limited to a practical application, and is therefore statutory.

For at least one or more of these reasons, Appellants respectfully submit that claim 32 is statutory.

42P14609 -8- 10/658,612

P.13/13

CONCLUSION

Based on the foregoing, Appellants request that the Board overturn the rejection of all pending claims and hold that all of the claims of the present application are allowable.

Appellants respectfully petition for an extension of time should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary extension fee or any other needed fee under 37 C.F.R. § 1.17.

Please charge any shortages and credit any overpayment to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: December 17, 2007

Tel.: (303) 740-1980 (Mountain Time)

1279 Oakmead Parkway Sunnyvale, California 94085-4040